

# Work Order ID 50985

July 28, 2009 1:55:50 PM

Page 1

Item ID: D412-664-203

Accept

Revision ID: D

Item Name: Crosstube Aft

Setup Start

Stop

Start Date: 7/30/09 Start Qty: 1.00

Required Date: 8/14/09 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D412-664-243

D

100

0.00

DC

Document Control

Memo

0.00

Photocopy bluefile and create labels as per PPP D412-664-203 CHG 006

S 08/09/23

HJ for CL 09/09/23

110

Pick Kit

0.00

Packaging

Memo

0.00

Packaging

CL 9/9/23 @

120

0.00

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D412-664-243 using CNC bender program 412-af and Folio FT010

9-9-16

50985

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

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Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC15- Crosstube Dimensional Check

0.00



QC

Memo

0.00

Quality Control

140

0.00



Crosstubes

Memo

0.00

Crosstubes

1-Drill pilot holes in tube as per Dwg D412-664-243 using drill Jig DT8550 & DT8551

2-Ream hole to finish size in tube as per Dwg D412-664-243 using drill Jig DT8550 & DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-SCRIBE PART # & BATCH #

4-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D412-664-243

MA  
8-9-17

- Andy 8-9-17

2050516

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start



QC: Date: SPC (Y/N): Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150

Crosstubes Chemical Conversion

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

1 0 - ALM 9-9-16

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

27 8 09/09/17



4

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

27 8 07/09/17



4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Date: 7/30/09

Start Qty: 1.00



Cust Item ID:

Required Date: 8/14/09

Req'd Qty: 1.00



Customer:

Reference:

Run Start

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 	Spray Painting per QSI005 4.2	0.00					09	09	21 ①
	SprayPaint	0.00							
	Spray Painting								
	Memo								
	1-Prime inside and outside crosstube as per QSI 005 4.2								
	2-Paint outside crosstube with White Imron as per QSI 005 4.2								
	PRIME: 10:30								
	Start Time: <del>10:30</del>								
	Finish Time: 11:00								
	PAINT: 3:00								
	Start Time: 3:00								
	Finish Time: 4:00								
220 	QC14- Inspect Spray Paint	0.00							
	QC	0.00							
	Quality Control								

ET 09-09-22

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Reference:

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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230

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

8/4/23 (1)

240

0.00



Crosstubes

Memo

0.00

Crosstubes

Assemble as per Dwg D412-664-203

1- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe

2-Install supports with magnobond as per QSI 015. Adhere for 12 Hrs

A/R 6398 Magnobond Batch: 111249  
Expiry Date: 02/2010

3-Install clamps as per Dwg D212-664-203 using installation jig DT9024 with 0.010 thick brass shims on both chafing shield (D3189-1). Torque clamps to 80-100 in lb.

m 09 09 23 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Required Date: 8/14/09 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start



QC: Date: SPC (Y/N): Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00	⇒ 8/2/09/23			②	φ		
260  Packaging Packaging	Pick Kit  Memo	0.00  0.00							② 09/19/23①
270  QC Quality Control	QC4- 100% Inspect kits for completeness  Memo	0.00  0.00	⇒ 8/2/09/23			②	φ		

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Required Date: 8/14/09 Req'd Qty: 1.00

Reference:

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Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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280

0.00



Packaging

Memo

0.00

Identify and pack for shipping as per PPP D412-664-203

\*\*\*\*\*Ensure tube is not packaged if curing time is less than 12 hrs, see step 27  
for application time & date \*\*\*\*\*

Time & date of packaging: 10:15 AM @ wed 23. Sept 2009

Location: \_\_\_\_\_  
PPP Rev: H

290

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/09/03 (1)

09/09/24 HJ  
MF  
09-09-24

W/O:		WORK ORDER CHANGES					
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# Picklist Print

July 28, 2009 1:55:49 PM

Page 1

Work Order ID: 50985

Parent Item: D412-664-203RevD

Parent Item Name: Crosstube Aft

Comments:

Start Date: 7/30/09

Required Date: 8/14/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D412-664- 203TRNRevD		Manufactured	No			110	Each	1.0000	1.0000			



Crosstube Turning Detail

DP 9-8-20

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
FG	3	
48397	1	
50131	1	
50132	1	

D3595-063-570RevA

Manufactured No



RUBBER CUSHION

230 Each 85.0000 4.0000



<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG	12	
37971	4	
42243	8	
Main Warehouse		
ST	73	
42243	13	
45509	60	

m/ 09 09 22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Page 2

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Parent Item Name: Crosstube Aft

Comments:

Start Date: 7/30/09

Required Date: 8/14/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2856-600RevA		Manufactured	No			230	f	463.5843	1.7684			



Abrasion Strip

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	465.2659789	
24328	6.73	
25656	87.77	
26650	8.23	
<u>36398</u>	147.475979	
37668	215.06	

(2X) D2856-600 (Cut to 10.090")

D2896-1RevU/R



Support

D3189-1RevB



Chafing Shield

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG	4	
36065	4	
Main Warehouse		
ST	22	
<u>43927</u>	1	
47777	21	

ml 09 09 22

ml 09 09 22 B43209

ml 09 09 22

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS21920-28		Purchased	No			230	Each	142.0000	4.0000			
												
Clamp(per MIL-DTL-8783C)												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG	5	
105884	5	
Main Warehouse		
ST	137	
106864	5	
108466	9	
108847	7	
109181	14	
109965	2	
111281	50	
111734	50	

MS21920-30		Purchased	No			230	Each	105.0000	2.0000			
												
clamp(per MIL-DTL-8783C)												

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	105	
107600	5	
109181	50	
111258	50	

ml 09 09 22

ml 09 09 22

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN6-40A S  Bolt		Purchased	No			260	Each	23.0000	4.0000			

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST

23

111424

23

260

Each

63.0000

2.0000

M112612

Pe 9/9/23 ①

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST

63

109371

13

111605

50

M111605

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Shop Packet Print

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD616 <i>8X</i>  Washer		Purchased	No			260	Each	326.0000	18.0000 ✓			

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST	326	
107242	3	
107959	6	
109371	8	
110704	23	
111193	18	
111607	268	

*m112314*

MS21042L6 <i>6X</i>  Nut		Purchased	No			260	Each	755.0000	6.0000 ✓			
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Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST	755	
105077	22	
110002	233	
111548	100	
111578	400	

*m111548*

*09/12/23 ①*

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

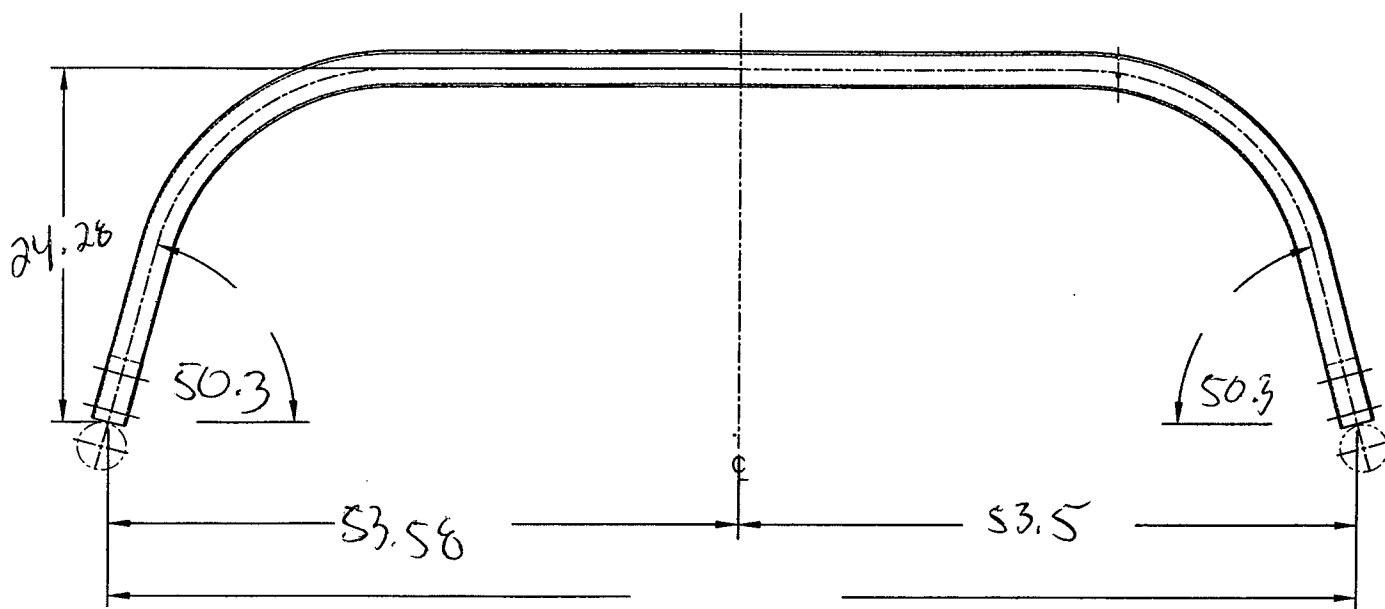
**Part No:** \_\_\_\_\_ **PAR #:** \_\_\_\_\_ **Fault Category:** \_\_\_\_\_ **NCR: Yes No** **DQA:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Resolution:** \_\_\_\_\_ **Disposition:** \_\_\_\_\_ **QA: N/C Closed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order: 50685
Description: Crosstube High Aft (412)		Part Number: D412-664-203
Inspection Dwg: D412-664-243 Rev: D		Page 1 of 1

Required Dimension	Min	Max
Height	24.24	24.50
1/2 Span	53.59	53.85
Angle	49	52
Total Span	107.18	107.70



Comments

QC15 Inspection	05/09/16
Date	05/09/16

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	07.05.08	Dimensions updated per Dwg rev. D	KJ/JLM	



**DART****RELEASE**

07.04.24

DESIGN <b>PH</b>	DRAWN BY <b>PH</b>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <b>QP</b>	APPROVED <b>PH</b>	DRAWING NO. D412-664-243	REV. D SHEET 1 OF 3
DATE 07.03.09		TITLE CROSSTUBE ASSEMBLY (412 HI AFT) NTS	
A	01.10.17	NEW ISSUE	
B	05.02.04	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	
C	06.10.27	REMOVE D2856-600-1087, ADD D2732-058 & MAGNOBOND 6398 MS21920-32 WAS MS21920-30	
D	07.03.09	REMOVE D2732-058, CHANGE TO D3595-063-570	

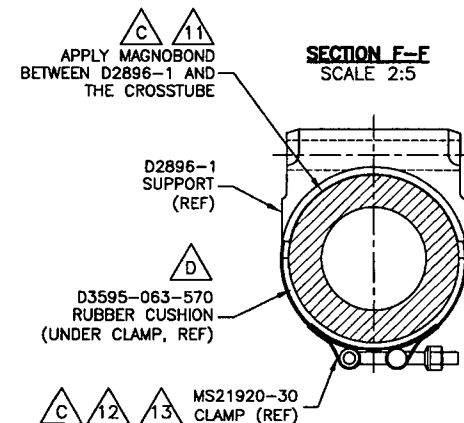
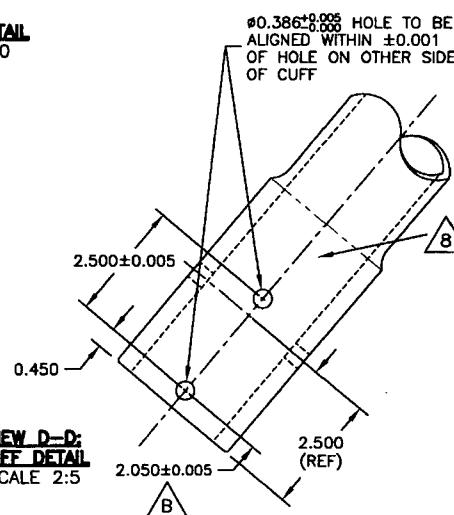
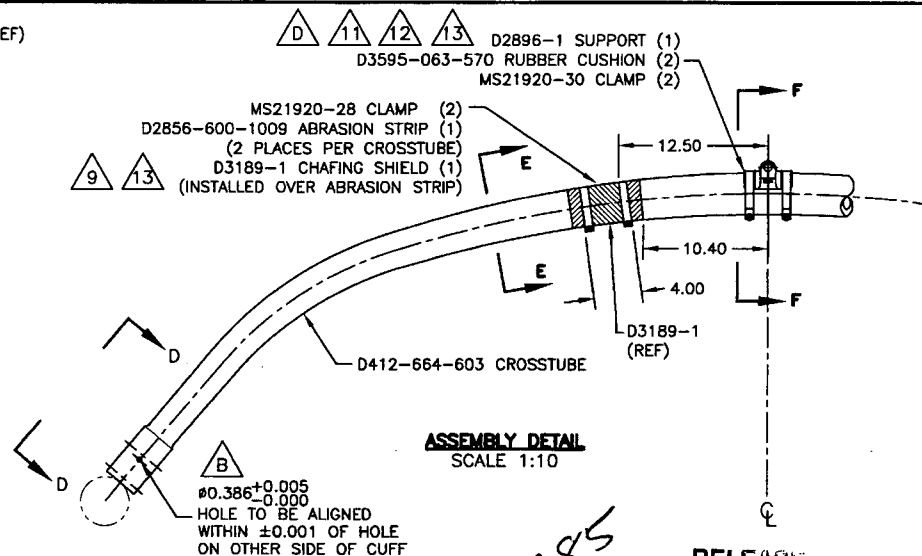
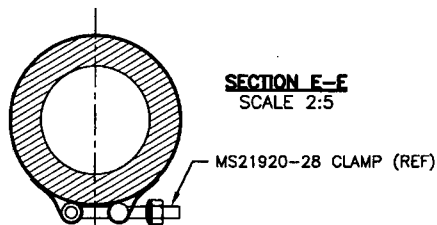
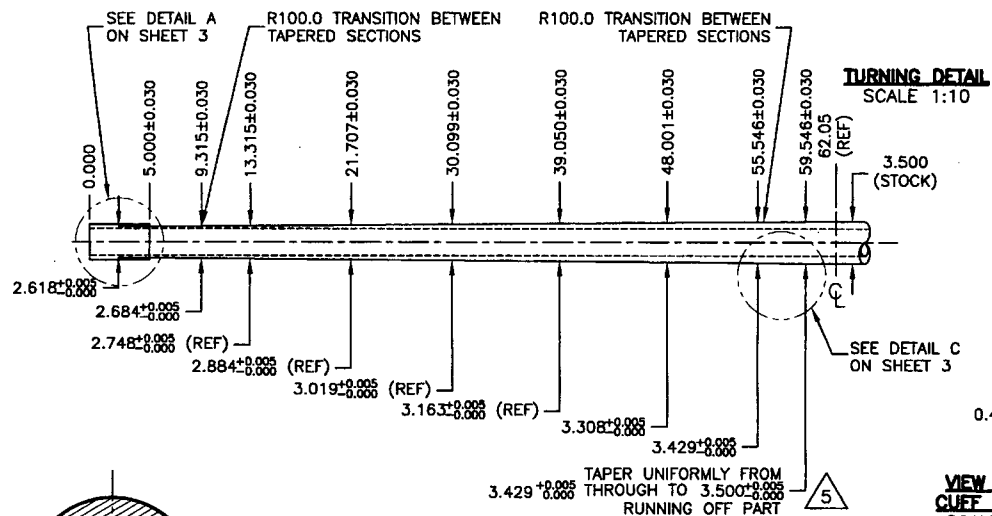
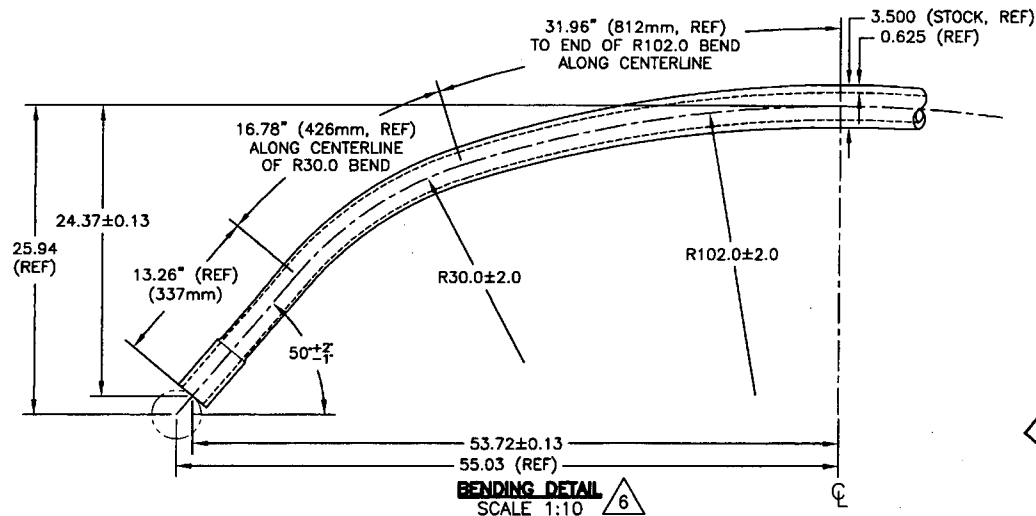
Qty	Part Number	Description
X	D412-664-243	CROSSTUBE ASSEMBLY (412 HIGH AFT)
1	D6009-129	CROSSTUBE
2	D3595-063-570	RUBBER CUSHION
1	D2896-1	SUPPORT
2	D2856-600-1009	ABRASION STRIP
4	MS21920-28	CLAMP
2	MS21920-30	CLAMP (OR MS21920-32)
2	D3189-1	CHAFING SHIELD
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6009-129  
FINISHED LENGTH = 124.09±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-600-1009 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2896-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-30 CLAMPS (OR -32) WITH D3595-063-570 RUBBER CUSHIONS TO SECURE D2896-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE SUPPORT.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

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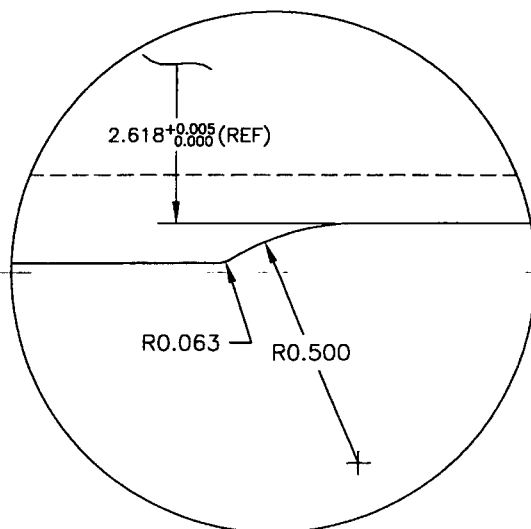
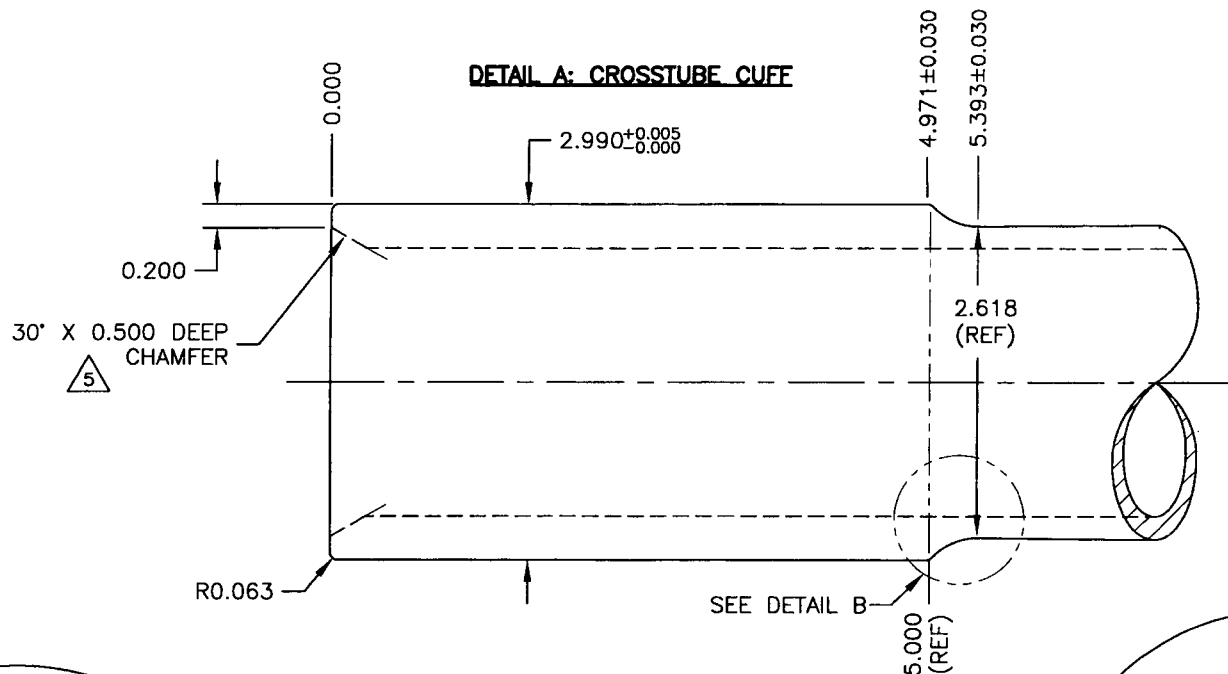
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DESIGN	PH	DRAWN BY	PH	<b>DART</b>	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
CHECKED	97	APPROVED	H	DRAWING NO. D412-664-243	REV. D SHEET 2 OF 3
DATE	07.03.09	TITLE	CROSSTUBE ASSEMBLY (412 HI AFT)	SCALE	1:10

RELEASE  
07 04 24

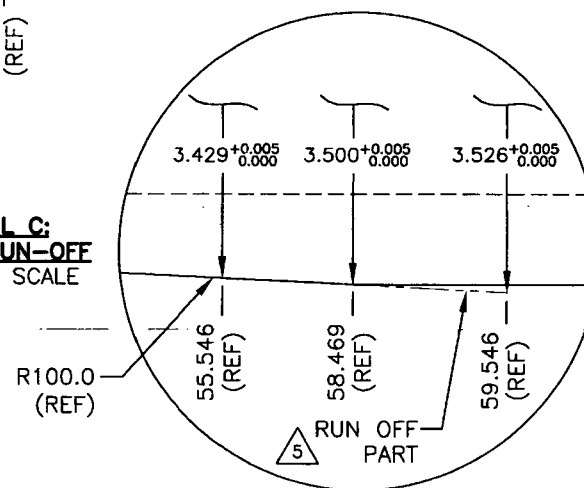
**RELEASED**  
07-04-244P  
PER ECN 887

**DETAIL A: CROSSTUBE CUFF**



**DETAIL B: CUFF  
TRANSITION**  
SCALE 4:1

**DETAIL C:  
TAPER RUN-OFF**  
NOT TO SCALE



50985

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DESIGN PH

DRAWN BY PH

**DART**

**DART AEROSPACE LTD.**

HARRISBURG, ONTARIO, CANADA

CHECKED J.

APPROVED [Signature]

DRAWING NO.  
D412-664-243

REV. D  
SHEET 3 OF 3

DATE  
07.03.09

TITLE  
CROSSTUBE ASSEMBLY (412 HI AFT) SCALE  
1:1



## LIQUID PENETRANT TEST REPORT

P- 0913

PAGE 1 OF

CLIENT Dart Aerospace DATE Sept 17<sup>th</sup> 2009 TIME AM ☒ F  
ATTENTION Linda Lucelle ACUREN JOB NO. 188-09-1556  
ADDRESS 1270 Aberdeen St. PO/WO No. 10419  
Hawkesbury WORK LOCATION Hawkesbury  
ACCEPTANCE STD. ASTM 1417/QS1038 REV./DATE 200  
PROJECT x-Tubes, on 12 studs and 31 sleeves  
ITEM(S) EXAMINED Sob #'s 50745, 51772, 50984, 50985, 51877, 51880

JOB DESCRIPTION PROCEDURE No. LT-0002 REV./DATE 101 TECHNIQUE No. LT-TECH2 REV./DATE 200  
PART NO. D3689-1, D3691-1, D412-664-203, D212-664-101 MATERIAL ALODINED ALUM. THICKNESS         
SCOPE WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON  
100% EXTERNAL SURFACE

TEST DETAILS  
METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EM  
FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N 8170 ☒ OUTPUT > 1000  $\mu$ W/cm<sup>2</sup> ☐ AMBIENT  
PENETRANT ZL 67 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☒ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @  
PENETRANT REMOVER H<sub>2</sub>O MINIMUM DRY TIME >10 MIN. OTHER CAL # JUNE 09  
DEVELOPER SKDS2 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N        CAL DUE DATE DEC  
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE  
SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL  
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/ 50°F ☐ 10°C/ 50°F TO 52°C/ 125°F ☐ > 52°C/ 125°F

RESULTS- ( ☐ METRIC ☐ IMPERIAL )

WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE ON:	No indication found at time of the inspection.  ACCEPTABLE TO STANDARD
31 Sleeves ID: D3689-1 ✓	
12 studs ID: D3691-1 ✓	
2 x Crosstube ART ID: D412-664-203 ✓	
2 x Crosstube Fwd ID: D412-664-101 ✓	

Scope of Services  
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressed that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions and data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

## Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

## SIGNATURES

CLIENT REPRESENTATIVE <u>C. LADORE</u> <u>Charles Ladore</u>	DTR # <u>      </u>
TECHNICIAN (SIGNATURE): <u>Frederick Chagnon</u>	REPORT REVIEWED BY: <u>      </u>
NAME (PRINT): <u>Frederick Chagnon</u>	NAME <u>      </u> IN <u>      </u>
1 <sup>st</sup> TECHNICIAN CGSB LEVEL <u>II</u> SNT LEVEL <u>II</u> CGSB REG. NO. <u>10560</u>	2 <sup>nd</sup> TECHNICIAN CGSB LEVEL <u>      </u> SNT LEVEL <u>      </u> CGSB REG. NO. <u>      </u>

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